

EC



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,321	07/31/2001	Douglas Michael Johnescu	FCI-2552/C27757 US	3732
7590 10/14/2003 Woodcock Washburn Kurtz Mackiewicz & Norris LLP 46th Floor One Liberty Place Philadelphia, PA 19103			EXAMINER LEON, EDWIN A	
			ART UNIT	PAPER NUMBER
			2833	
DATE MAILED: 10/14/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,321

Applicant(s)

JOHNESCU ET AL.

Examiner

Edwin A. León

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-22, and 29-30 is/are allowed.
- 6) ☒ Claim(s) 1, 7, 8, 10-12, 15-18, 23, 24, 27 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 2-6, 9, 14, 25, 26, 28 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed August 11, 2003, in which Claims 1, 10, and 33 have been amended, has been placed of record in the file as Paper No. 10.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 7-8, 10-12, 15-18, 23-24, 27, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemke et al. (U.S. Patent No. 6,024,584) in view of Lee et al. (U.S. Patent No. 4,045,105). With regard to Claim 1, Lemke et al. discloses a modular mezzanine connector system, comprising: a plug assembly (430,432,434,436), comprising a first common base (432) comprising a plurality of fusible elements (484,470,492,404,398,400,406) which are each disposed within a pocket (440,438) defined within the first common base (432); a plug contact assembly (478,464,488) mounted within the plug assembly (430,432,434,436) comprising a plurality of plug contacts (478,464,488), each plug contact (478,464,488) comprising an

Art Unit: 2833

end (upper part of (478,464,488)) which is secured to one of the fusible elements (484,470,492,404,398,400,406) within one of the pockets (440,438) of the first common base (432); a plug cover (436) coupled to the first common base (432); a receptacle assembly (330,324) that mates with the plug assembly (430,432,434,436), comprising a second common base (326) comprising a plurality of fusible elements (484,470,492,404,398,400,406) which are each disposed within a pocket (332,336,340) disposed within the second common base (326) and wherein the first common base (432) and the second common base (326) are substantially identical; a receptacle contact assembly (408) mounted within the receptacle assembly (330,324) comprising a plurality of receptacle contacts (408), each receptacle contact (408) comprising an end (386) which is secured to one of the fusible elements (484,470,492,404,398,400,406) within one of the pockets (332,336,340) of the second common base (326). See Figs. 24-25.

However, Lemke et al. doesn't show a receptacle cover coupled to the second common base and mating with the plug cover.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the receptacle in two pieces, a base and a cover, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erichman*, 168 USPQ 177, 179.

Still, Lemke et al. doesn't show the bases being interchangeable.

Lee et al. discloses a modular connector system having interchangeable bases (20, 102). See Fig. 4, Column 2, Lines 61-68 and Column 6, Lines 53-64.

Art Unit: 2833

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the assembly of Lemke et al. by having the bases being interchangeable as taught in Lee et al. in order to make the construction of the assembly easily by avoiding the use of different parts.

With regard to Claim 7, Lemke et al. discloses the plurality of plug and receptacle contacts (478,464,488, 408) are disposed in an in-line stripline configuration. See Figs. 24-25.

With regard to Claim 8, Lemke et al. discloses the plurality of plug contacts (478,464,488) and receptacle contacts (408) comprising signal contacts and are disposed in a row with each contact oriented perpendicular to a ground plane. See Figs. 24-25.

With regard to Claims 10, 16-18 and 27, Lemke et al. discloses a method of making a modular mezzanine connector system to a desired stack height, comprising: inserting a plurality of plug contacts (478,464,488) into a first common base (432); coupling a plug cover (436) to the first common base (432) and if needed to meet the desired stack height attaching a spacer between the plug base and the plug cover (436); inserting a plurality of receptacle contacts (408) into a second common base (326); coupling a receptacle cover (330) to the second common base (326). See Figs. 24-25.

However, Lemke et al. doesn't show a receptacle cover coupled to the second common base and mating with the plug cover.

Art Unit: 2833

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the receptacle in two pieces, a base and a cover, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erichman*, 168 USPQ 177, 179.

Still, Lemke et al. doesn't show the bases being interchangeable.

Lee et al. discloses a modular connector system having interchangeable bases (20, 102). See Fig. 4, Column 2, Lines 61-68 and Column 6, Lines 53-64.

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the assembly of Lemke et al. by having the bases being interchangeable as taught in Lee et al. in order to make the construction of the assembly easily by avoiding the use of different parts.

With regard to Claim 11, Lemke et al. discloses each of the fusible elements (484,470,492,404,398,400,406) comprising a solder ball. See Figs. 24-25.

With regard to Claim 12, Lemke et al. discloses that wherein inserting the plurality of plug contacts (478,464,488) further comprises inserting the plurality of plug contacts (478,464,488) in an in-line stripline configuration and wherein inserting the plurality of receptacle contacts (408) further comprises inserting the receptacle contacts (408) in an in-line stripline configuration. See Figs. 24-25.

With regard to Claim 13, Lemke et al. discloses that wherein inserting the plurality of plug contacts (478,464,488) further comprises inserting the plurality of plug contacts (478,464,488) in a row with each contact oriented perpendicular to a ground plane and wherein inserting the plurality of receptacle contacts (408) further comprises

Art Unit: 2833

inserting the receptacle contacts (408) in a row perpendicular to a ground plane. See Figs. 24-25.

With regard to Claim 15, Lemke et al. discloses that wherein coupling the plug cover (436) to the first common base (432) comprises inserting a plurality of tabs (upper part of the contacts) extending from the first common base (432) into a plurality of channels (454,456,458) in the plug cover (436). See Figs. 24-25.

With regard to Claim 23, Lemke et al. discloses the plurality of plug contacts (478,464,488) and receptacle contacts (408) comprise rows of signal and ground contacts disposed in a pattern. See Figs. 24-25.

With regard to Claim 24, Lemke et al. discloses each plug ground contact (478,464,488) comprising a first lateral side and a second lateral side and wherein the receptacle ground contacts (408) within a row alternate mating with the first lateral side and the second lateral side of a ground plug contact (408). See Figs. 24-25.

With regard to Claim 33, Lemke et al. discloses an electrical connector system, comprising: a plug assembly (430,432,434,436), comprising a first common base (432) comprising a plurality of fusible elements (484,470,492,404,398,400,406) which are each disposed within a pocket (440,438) defined within the first common base (432); a plug contact assembly (478,464,488) mounted within the plug assembly (430,432,434,436) comprising a plurality of individual ground and signal plug contacts (478,464,488), each plug contact (478,464,488) comprising an end (upper part of (478,464,488)) which is secured to one of the fusible elements (484,470,492,404,398,400,406) within one of the pockets (440,438) of the first common

Art Unit: 2833

base (432); a plug cover (436) coupled to the first common base (432); a receptacle assembly (330,324) that mates with the plug assembly (430,432,434,436), comprising a second common base (326) comprising a plurality of fusible elements (484,470,492,404,398,400,406) which are each disposed within a pocket (332,336,340) disposed within the second common base (326) and wherein the first common base (432) and the second common base (326) are substantially identical; a receptacle contact assembly (408) mounted within the receptacle assembly (330,324) comprising a plurality of individual ground and signal receptacle contacts (408), each receptacle contact (408) comprising an end (upper part of 408) which is secured to one of the fusible elements (484,470,492,404,398,400,406) within one of the pockets (332,336,340) of the second common base (326), each receptacle signal contact (408) mating one of the individual plug signal contacts (478,464,488) and each receptacle ground contact (408) mating one of the individual plug ground contacts (478,464,488). See Figs. 24-25.

However, Lemke et al. doesn't show a receptacle cover coupled to the second common base and mating with the plug cover.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the receptacle in two pieces, a base and a cover, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erichman*, 168 USPQ 177, 179.

Still, Lemke et al. doesn't show the bases being interchangeable.

Art Unit: 2833

Lee et al. discloses a modular connector system having interchangeable bases (20, 102). See Fig. 4, Column 2, Lines 61-68 and Column 6, Lines 53-64.

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the assembly of Lemke et al. by having the bases being interchangeable as taught in Lee et al. in order to make the construction of the assembly easily by avoiding the use of different parts.

4. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemke et al. (U.S. Patent No. 6,024,584). With regard to Claims 31-32, Lemke et al. discloses the claimed invention as described above except for the base comprising a plurality of diamond shaped pockets.

However, it would have been obvious to make the pockets in diamond shape since applicants have presented no explanation that these particular configurations of the pockets are significant or are anything more than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of receiving the fusible elements. A change in shape is generally recognizing as being within the level of ordinary skill in the art. In re Dailey, 149 USPQ 47 (CCPA 1976).

Allowable Subject Matter

5. Claims 2-6, 9, 14, 25-26, 28, and 34 are objected for the reasons given in the Office Action of September 27, 2002.

Art Unit: 2833

6. Claims 19-22, 29-30 are allowed for the reasons given in the Office Action of September 27, 2002.

Response to Arguments

7. Applicant's arguments filed August 11, 2003 have been fully considered but they are not persuasive. In response to Applicant's arguments regarding Claims 1, 10 and 33 that the Lemke et al. doesn't show the plug and receptacle bases being interchangeable, Applicant is reminded that this limitation is newly presented. Still, it is the Examiner's opinion that one with ordinary skill in the art would modify the assembly of Lemke et al. by having the bases being interchangeable as taught in Lee et al. in order to make the construction of the assembly easily by avoiding the use of different parts.

In response to Applicant's arguments regarding Claims 31-32 that the Lemke reference doesn't show diamond shape pockets and that this shape would not be obvious to one with ordinary skill in the art since Applicant explained the benefits in the Specification, Applicant is reminded that the sections cited by Applicant and the entire Specification talks about the benefits of the diamond pockets disposed in an interstitial diamond configuration, which was the reason why Claim 19 was allowed. There is no mention of any benefits of the diamond pockets as claimed in Claims 31-32. Therefore, it is the Examiner's opinion that applicants have presented no explanation that these particular configurations of the pockets are significant or are anything more than one of

Art Unit: 2833

numerous configurations a person of ordinary skill in the art would find obvious for the purpose of receiving the fusible elements.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

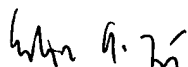
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone

Art Unit: 2833

numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Edwin A. Leon
AU 2833

EAL
May 6, 2003

P. AUSTIN BRADLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800